

REMARKS

Claims 5-7 and 12 stand allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. Claims 1-4, 8-11, and 13-16 stands rejected under 35 USC §103(a) as being unpatentable over Ando et al., U.S. patent 6,550,037 in view of Tetelbaum, U.S. patent application US 2005/0060675 A1.

A supplemental Declaration to overcome the objections to the Declaration as originally filed has been prepared and will be filed promptly when executed.

Claims 2-8, and 10-16 have been amended to more clearly state the invention. Claims 1 and 9 have been cancelled. Indicated allowable claims 5, 7 and 12 have be rewritten in independent form including all of the limitations of the base claim and any intervening claims. Dependent claims 2-8, 10-11, and 13, as amended, respectively depend from indicated allowable claims 5 and 12. Independent claim 14 has been amended to further include subject matter limitations of both indicated allowable claims 5 and 7.

Reconsideration and allowance of each of the pending claims 2-8, and 10-16, as amended, is respectfully requested.

Ando et al., U.S. patent 6,550,037 discloses a method for designing a decoupling circuit for a source line of a LSI includes the steps of determining the capacitance of the decoupling capacitor based on the electric charge necessary for one cycle operation of the LSI and the allowable fluctuation of the source voltage, and determining the inductance of the source line based on the impedance of the

Serial No. 10/731,064

decoupling capacitor and the allowable minimum multiplexing ratio of the source current by the decoupling capacitor.

Tetelbaum, U.S. patent application US 2005/0060675 discloses a method of noise analysis and correction of noise violations for an integrated circuit design includes steps of (a) receiving as input a standard parasitic exchange file for an integrated circuit design; (b) parsing the standard parasitic exchange file to generate a resistance graph; (c) generating a representation of the resistance graph to determine noise critical nets; (d) generating a list of only noise critical nets from the representation of the resistance graph; (e) selecting a net from the list of only noise critical nets; (f) calculating a value of total crosstalk noise in the selected net from all aggressor nets relative to the selected net; and (g) generating as output the value of total crosstalk noise in the selected net for correcting a noise violation.

Independent claim 14, as amended, recites an apparatus for implementing automated detection of excess shape coupling in printed circuit board (PCB) layouts comprising: an excess shape coupling detection program for receiving a PCB design file containing an electronic representation of a printed circuit board design; for using said PCB design file for identifying a list of candidate shapes, said candidate shapes disposed on layers adjacent to aggressor planes; for calculating an effective capacitance coupling the candidate shapes to adjacent noise-generating planes including identifying an overlap area of the candidate shapes to each adjacent noise-generating plane; for determining a ratio of each said calculated effective capacitance and a decoupling capacitance connecting the respective candidate shape to a

reference plane; for sorting said determined ratios to produce a ranked list of the candidate shapes; and a user interface for displaying said ranked list of the candidate shapes for user review. Independent claim 14, as amended, recites that the excess shape coupling detection program for calculating an effective capacitance coupling the candidate shapes to adjacent noise-generating planes including identifying an overlap area of the candidate shapes to each adjacent noise-generating plane. Thus, Independent claim 14, as amended, further defines the excess shape coupling detection program to include limitations of both indicated allowable claim 5 and 7. These limitations as recited in independent claim 14, as amended, is not disclosed or suggested by the combined teachings of Ando et al. and Tetelbaum.

Thus, independent claim 14, as amended, is patentable.

Dependent claims 2-6, 8, 10-13 and 15-16 respectively depend from patentable claims 5, 12, and 14, further defining the invention. Each of the dependent claims 2-6, 8, 10-13 and 15-16, as amended, is likewise patentable.

Applicants have reviewed all the art of record, and respectfully submit that the claimed invention is patentable over all the art of record, including the references not relied upon by the Examiner for the rejection of the pending claims.

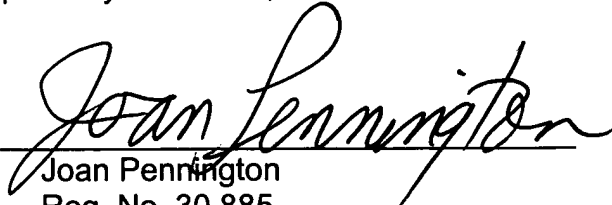
It is believed that the present application is now in condition for allowance and allowance of each of the pending claims 2-8, and 10-16, as amended, is respectfully requested. Prompt and favorable reconsideration is respectfully requested.

If the Examiner upon considering this amendment should find that a telephone interview would be helpful in expediting allowance of the present application,

Serial No. 10/731,064

the Examiner is respectfully urged to call the applicants' attorney at the number listed below.

Respectfully submitted,

By: 
Joan Pennington
Reg. No. 30,885
Telephone: (312) 670-0736